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L29: Entry 3 of 85 File: PGPB Jan 22, 2004

DOCUMENT-IDENTIFIER: US 20040014083 A1
TITLE: Detection of heteroduplex polynucleotides using mutant nucleic acid repair enzymes with attenuated catalytic activity

Detail Description Paragraph:
[0709] Another technique that has gained popularity recently is fluorescence polarization or anisotropy (Jameson et al., Methods Enzymol., 246:283-300 (1995); Lundblad et al., Mol. Endocrinol., 10:607-612 (1996); Checovich et al., Nature, 375:254-256 (1995); Levine et al., Anal. Biochem., 247:83-88 (1997); Jolley, J. Biomol. Screening, 1:33-38 (1996); Schade et al., Anal. Biochem., 243:1-7 (1996); Lynch et al., Anal. Biochem., 247:77-82 (1997)). When fluorescently labeled molecules in solution are illuminated with plane-polarized light, the emitted fluorescence will be in the same plane provided the molecules remain stationary. Since all molecules tumble as a result of collisional motion, depolarization phenomenon is proportional to the rotational relaxation time () of the molecule, which is defined by the expression 3.cedilla.V/RT. At constant viscosity (.cedilla.) and temperature (T) of the solution, polarization is directly proportional to the molecular volume (V) (R is the universal gas constant). Hence, changes in molecular volume or molecular weight due to binding interactions can be detected as a change in polarization. For example, the binding of a fluorescently labeled ligand to its receptor will result in significant changes in measured fluorescence polarization values for the ligand. Once again, the measurements can be made in a "mix and measure" mode without physical separation of the bound and free ligands. The polarization measurements are relatively insensitive to fluctuations in fluorescence intensity when working in solutions with moderate optical intensity.

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L29: Entry 4 of 85 File: PGPB Jan 15, 2004

DOCUMENT-IDENTIFIER: US 20040010197 A1
TITLE: Multi-modal optical tissue diagnostic system

Detail Description Paragraph:
[0050] An alternative to the phase change method discussed above to determine fluorescence lifetime is the measurement of fluorescence depolarization or anisotropy. The instrumentation used is similar to that used for reflectance depolarization. Indeed the same instrument can readily be used for measurement based on both principles. In clear solution (where photons are not depolarized due to scattering) the measurement of fluorescence polarization anisotropy provides an estimate of the fluorescence lifetime of the fluorophores being interrogated. This is represented by the Perrin Equation (Perrin et. al.) which relates fluorescence Anisotropy (r) to Lifetime (.tau.) 1 ro r = 1 + Equation 1

WEST Search History

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DATE: Monday, March 15, 2004

Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT,EPAB,DWPI; PLUR=YES; OP=ADJ		
☐	L1	fluorescence polarization anisotropy	85
	DB=PGPB,USPT,USOC,EPAB,DWPI; PLUR=YES; OP=ADJ		
☐	L2	Densham-D$.in.	9
☐	L3	(sequenc$ near polynucleotide) same (enzyme or polymerase)	4284
☐	L4	(sequenc$ near polynucleotide) same (enzyme or helicase or primase)	2435
☐	L5	L3 and enzyme activity	1108
☐	L6	L4 and enzyme activity	779
☐	L7	(L5 or L6) and ((conformation$ change) same enzyme)	23
☐	L8	L7 and (solid support)	16
☐	L9	L7 and ((FRET near Pair) or (energy acceptor and energy donor) or (acceptor and donor))	14
☐	L10	(L7 or L8 or L9) and confocal microscopy	3
☐	L11	(L7 or L8 or L9) and fluorescence imag$	0
☐	L12	(L7 or L8 or L9) and polarization	2
☐	L13	fluorescent imaging	530
☐	L14	(L7 or L8 or L9) and fluorescen$ imag$	2
	DB=USPT,DWPI; PLUR=YES; OP=ADJ		
☐	L15	(sequencing near polynucleotide)	276
☐	L16	target same (enzyme or polymerase or helicase or primase)	19917
☐	L17	L16 and (conformational change near enzyme)	62
☐	L18	L17 and (label)	29
☐	L19	L17 and ((FRET near pair) or (acceptor same donor))	6
☐	L20	L19 and (solid support)	2
☐	L21	L18 and solid support	16
☐	L22	(L18 or L19) and (confocal microscopy)	0
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☐	L23	L17 and confocal microscop$	1
☐	L24	L17 and polarization	34
☐	L25	L17 and fluorescen$ imag$	0
☐	L26	(fluorescent or fluorescence) near imaging	1954
	L27	L26 and L16	168

☐			
☐	L28	L27 and L15	6
☐	L29	fluorescence polarization anisotropy	85

END OF SEARCH HISTORY